over, fish of over 35 lbs. are surprisingly common. But in between there seems to be a gap. My own records and observations of the population of Jungoo agree with this, though I cannot account for it. It would be interesting to find out if the larger Jhelum fish migrate upstream to the Woolar Lake, a gruelling journey which would cause heavy casualties. It is possible that the monsters spawn in the lower tributaries of the Poonch, each having its fixed territory, so obviating the dangerous struggle upstream. I have never seen very large fish at the Jhelum fish-jumps during the actual migration, though it is common knowledge that fish of over 50 lbs. are to be caught at Ningle in August.

A NOTE ON SOME SNAKES OF BENARES (U.P.)[1]

BY

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The 'Kaiser Castle'[2] at Benares, which at present houses the office and collections of the Zoological Survey of India, consists of blocks of buildings in a large compound situated on the bank of the Varuna river. Specimens of snakes occasionally found in the compound or inside the rooms of the 'Kaiser Castle' have been collected by some members of the staff during the last three years. The collection at present consists of 17 specimens belonging to 5 species.

The collection at my disposal is far too small to give any idea of the number of species of snakes occurring in and around Benares, but as practically nothing is known of the snake fauna of this area, a record of the species already collected will, it is hoped, prove useful. Except for one paper by Wall[3] on the snakes of the Fyzabad district, I am not aware of any works dealing with the reptilian fauna of the United Provinces specially. During the course of 19 months active collection at Fyzabad, Wall was able to collect 704 specimens referable to 18 different species.

Fauna as a whole in Benares is very poor. Nevill[4] has remarked: 'The density of population, the high state of agricultural development and the absence of forests or extensive jungles combine to render Benares one of the poorest districts in the matter of wild animals of all those that are comprised in United Provinces.'

I am grateful to Dr. B. N. Chopra, Director, Zoological Survey of India, for going through the manuscript and making some helpful suggestions, which, I feel, have materially improved

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[1] Published with the permission of the Director, Zoological Survey of India.

[2] Named after the owner H. E. Sir Kaiser Shumshere Jung Bahadur, Rana of Nepal.

[3] Wall, F., *Journ., Bombay Nat. Hist. Soc.*, xviii, pp. 101-129 (1907).

[4] Nevill, H. R., *Gazetteer of Benares*, xxvi, pp. 17-18 (1909).

this note. I am also thankful to those members of the staff of the Zoological Survey, who have collected the specimens on which this note is based.

The following 5 species are represented in the collection:

FAMILY: COLUBRIDAE.

1. *Ptyas mucosus* (Linn.): 8 specimens; collected in March, July, September, October and November.
2. *Oligodon arnensis* (Shaw): 2 specimens; collected in March, and April.
3. *Lycodon a. aulicus* (Linn.): 4 specimens; collected in June, July and September.
4. *Natrix piscator* (Schneider): 1 specimen; collected in June.

FAMILY ELAPIDAE.

5. *Naja n. naja* (Linn.): 2 specimens; collected in April and June.

Ptyas mucosus (Linn.)

(The Rat Snake or Dhaman)

1758. *Coluber mucosus*, Linn, *Syst. Nat., Ed.* 10, p. 226.
1864. *Pyas mucosus*, Gunther, *Rept. Brit. India*, p. 249.
1943. *Ptyas mucosus*, Smith, *Fauna Brit. India.* (Reptilia & Amphibia), iii, p. 159.

There are 8 specimens in the collection, varying in length between 413-1670 mm.

Wall (*loc. cit.*, 1907, p. 114) has remarked on the variation in the range of ventrals and subcaudals in this species and has pointed out that in the Fyzabad specimens there is a tendency for the subcaudals to be fewer in number than in the examples he had previously examined from Cannanore. The same is also observed in the 8 specimens from Benares that I have examined, as is seen in the accompanying table.

Comparative Table of Scale Counts.

		Ventrals		Subcaudals
Fyzabad collection	(8) [1] ♂	192–207	100–126
	(8) ♀	191–206	108–115
Benares „	(8)	192–209	102–124
Cannanore „	(4) ♂	197–202	127–137
	(3) ♀	192–196	128–132

According to Smith the range in the number of the ventrals and the subcaudals is as follows:

Ventrals 190-213; Subcaudals 100-146. Wall and Pope[2] have stated that the males are greater in length than the females.

Ptyas mucosus is found throughout India and Indo-China. It has also been recorded from Java and Sumatra.

[1] The figures in parentheses show the number of specimens on which the scale counts are based.

[2] Pope, C. H., *The Reptiles of China*, x, p. 221 (1935).

Oligodon arnensis (Shaw)

(The Common Kurki Snake.)

1802. *Coluber arnensis*, Shaw, *Gen. Zool.* iii, p. 526 (based on Russell's fig. 38).

1890. *Simotes arnensis*, Boulenger, *Fauna Brit. India.* (Rept. & Batrachia), p. 314.

1943. *Oligodon arnensis*, Smith, *Fauna Brit. India.* (Rept. & Amphibia), iii, p. 225.

Oligodon arnensis is represented in the collection by two juvenile specimens, measuring 185 and 175 mm. respectively.

The larger specimen has 32 black bars on the body and 12 on the tail, while the smaller one has 34 bars on the body and 10 on the tail. The broadest black bars occupy 3 scales. They are narrower on the sides, have white margins and do not reach the ventrals.

Wall[1] has noted that specimens from the United Provinces, Punjab, N.W. Frontier and Western Himalayas have 41-54 black bars on the body and 9-12 on the tail, while one specimen from Orissa had 37 bars on the body and 6 on the tail.

Smith after examining a series of specimens from different localities came to the conclusion that the number of black bars on the body and the tail is roughly correlated with the geographical distribution of the species. He arranged them as follows:

Ceylon, 13-18 on the body, 3-6 on the tail.

India, South of lat. 20° 18-30 on the body, 4-16 on the tail.

India, North of lat. 20° 7-20 on the body, 7-20 on the tail.

In both the specimens from Benares the loreal scale is present. According to Smith this scale is usually present in specimens north of lat. 20°, but absent in examples south of that line. Wall (*loc. cit.*, 1914, p. 755) has also remarked that the loreal is rarely absent in examples from Fyzabad.

Oligodon arnensis is very widely distributed, and is one of the common forms found in the United Provinces. According to Smith 'Its habits are chiefly diurnal, and it appears to make its home for the most part in masonry, domiciling itself in bungalows and out-houses'.

Lycodon aulicus aulicus (Linn.)

(The Common Wolf Snake.)

1758. *Coluber aulicus*, Linn., *Syst. Nat.*, 10th Ed., p. 220.

1870. *Lycodon aulicus*, Stoliczka, *Journ., Asiat. Soc. Bengal*, xxxix, p. 201.

1943. *Lycodon a. aulicus*. Smith, *Fauna Brit. India* (Rept. & Amph.), iii, p. 265.

There are four examples of *Lycodon a. aulicus* in the collection varying in total length between 450-540 mm. Wall[2] gives the total length of the largest male and female of this species, so far recorded, as 692 and 737 mm. respectively.

In every specimen there are 8 upper labials, of which the 3rd, 4th and 5th, touch the eye. There is absence of brown spots on the upper labials of one specimen (collected in Sept. 1942), while the rest have faint brown spots.

In all the 35 examples in the Fyzabad collection examined by Wall (*loc. cit.*, 1907, p. 113), the anal scale was found to be divided. In my collection from Benares there is one specimen in which this scale is entire. This aberration has been recorded by Smith (*loc. cit.*, 1943, p. 255) in several species of *Lycodon*, such as *aulicus, striatus,* and *travancoricus.*

The colouration of all the four specimens is of the same type, but the number of cross bars on the dorsal surface varies considerably. One example

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[1] Wall, F., *Journ., Bombay Nat. Hist. Soc.*, xxii, p. 751 (1914).

[2] Wall, F., *Ophidia Taprobanica*; p. 159 (1921).

has 19 cross bars, one 15, one 18 and the remaining one 10. In every case these bars are whitish with faint brown spots.

Smith[1] has described the arboreal habit of *Lycodon aulicus*, stating ' It is a good climber and appears to prefer the roof to the floor'.

Natrix piscator piscator (Schneider.)

(The Chequered Water Snake.)

1799. *Hydrus piscator*, Schneider, *Hist. Amph.*, i, p. 247.
1940. *Natrix p. piscator*, Smith, *Rec. Ind. Mus.*, xlii, p. 483.
1943. *Natrix p. piscator*, Smith, *Fauna Brit. India* (Rept. & Amph.), iii, p. 295.

Four fairly well defined races of this species are recognizable, dependent chiefly on the colour pattern and geographical distribution.

According to Smith the following races are found in India:

1. *Natrix piscator piscator.*
2. *Natrix piscator flavipunctata.*
3. *Natrix piscator asperrimus.*
4. *Natrix piscator melanzostus.*

There are blackish spots on the dorsal surface giving off a bluish sheen. The spots are arranged in a 'Chess-board pattern'. The under-surface is whitish. The scale counts and the length of the single specimen in my collection are given below:

Scale counts: Mid-body 19; Ventrals 138; Caudals 78.

Total length: 976 mm. Tail 269 mm.

Natrix piscator chiefly feeds on frogs and fish. It causes great destruction to fish, when they are herded into shallow water at the end of the dry season.

Naja naja naja (Linn.)

(The Indian Cobra.)

1758. *Coluber naja*, Linn., *Syst. Nat.*, 10th Ed., p. 221.
1943. *Naja n. naja*, Smith, *Fauna Brit. India* (Rept. & Amph.), iii, p. 431.

The most striking point of interest in the present species is the variation in the colour scheme and in the markings of the hood. Smith on the basis of the 'hood design' divided 'Indian cobras' (*Naja naja*) in three races, which can be correlated to some extent with geographical distribution also. Bannerman & Pocha[2], after examining a series of specimens, had come to the same conclusion many years earlier. Wall found 12 different designs or patterns of the hood markings in his 39 examples from Fyzabad.[3] Out of the two specimens under report, the hood markings are distinct in one and tally with the markings shown by Wall on Plate I, fig. 4. In the second example the markings are interrupted and broken on the sides.

The colouration is brown in one specimen and blackish brown in the other. The total length of the specimens is 870 and 780 mm. respectively.

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[1] Smith, M.A., *Journ., Nat. Hist. Soc., Siam*, i, p. 16 (1914).

[2] Bannerman, W. B. & Pocha, J. B., *Journ., Bombay Nat. Hist. Soc.*, xvi, p. 638 (1905).

[3] There are beautiful plates in black-and-white drawn by Wall (*Journ., Bombay Nat. Hist. Soc.*, xviii, pl. I & II, 1907) showing different hood patterns found in Fyzabad specimens.